# OPEN PEER REVIEW REPORT 1

**Name of journal:** Neural Regeneration Research
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**Title:** Potential therapeutic molecular targets for blood-brain barrier disruption after subarachnoid hemorrhage
**Reviewer's Name:** Nathan K. Evanson
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## COMMENTS TO AUTHORS

The manuscript entitled "Potential therapeutic molecular targets for blood-brain barrier disruption after subarachnoid hemorrhage" is a succinct summary of signaling pathways that are active in subarachnoid hemorrhage. The authors make the case that subarachnoid hemorrhage is an important pathology in human disease, and that interrupting signaling pathways active in subarachnoid hemorrhage might be an important road forward in improving treatment of this process. The illustrative figure is helpful in visualizing signaling pathways that are important in this pathway. I have a few comments:

1. Is there any evidence that reducing blood-brain-barrier disruption per se improves outcomes after subarachnoid hemorrhage? This would strengthen the argument that treating this endpoint will be important for clinical management of hemorrhage.
2. First page, line 14: what are some of the harmful blood contents associated with this process?
3. On the last page of the article, discussion of beta-catenin signaling might fit more appropriately in the previous section, since it is involved in tight junction regulation/disruption; it is not clear to me why this pathway was saved for the end of the paper.
4. The Perspective section would benefit greatly from a short summary of which pathways have evidence for improved outcomes (pathologic or functional) when they are modulated.
5. Figure 1 is not referenced in the text.
6. The authors could consider highlighting in the figure which signaling pathways have any evidence that modulating them will improve post-hemorrhage outcomes (but this is not necessary).